

Applicant amends the claims as represented by the following listing of claims:

In the Claims:

*Subj*

Claim 1 (Currently amended): An article of manufacture comprising a substantially transparent substrate of a size and shape suitable for use as a decorative object selected from the group consisting of gemstones and non-functional ornaments and a multilayer thin film interference coating over substantially the entire surface of said substrate, said coating consisting of alternating layers of substantially nonabsorbing materials with a relatively high refractive index and a relatively low refractive index with respect to each other, the thicknesses and identities of said layers being chosen so that the entire coating will preferentially reflect at least some of the incident light with wavelengths between 400 nm and 700 nm inclusive.

Claim 2 (Original): The article in claim 1 in which the substrate is a member selected from the group consisting of silicon dioxide, aluminum oxide, zirconium oxide, titanium oxide, hafnium oxide, germanium oxide, zinc oxide, scandium oxide, yttrium oxide, calcium oxide, magnesium oxide, barium oxide, beryllium oxide, boron oxide, phosphorus oxide, lead oxide, arsenic oxide, sodium oxide, potassium oxide and carbon.

Claim 3 (Original): The article in claim 1 in which the substrate is comprised of a polymeric material.

Claim 4 (Original): The article of claim 1 in which the alternating layers comprising the multilayer thin film interference coating are composed of metal oxides.

Claim 5 (Original): The article of claim 1 in which the alternating layers comprising the multilayer thin film interference coating comprise materials selected from

the group consisting of silicon dioxide, aluminum oxide, tantalum oxide, niobium oxide, titanium dioxide, hafnium dioxide, zirconium dioxide, magnesium fluoride, calcium fluoride, zinc sulfide, zinc selenide and carbon.

Claim 6 (Original): The article of claim 1 in which the number of layers comprising the multilayer thin film interference coating is three or greater.

Claim 7 (Original): The article of claim 1 in which the alternating layers comprising the multilayer thin film interference coating are sequentially deposited by a chemical vapor deposition process.

Claim 8 (Original): The article of claim 1 in which the alternating layers comprising the multilayer thin film interference coating are sequentially deposited by a low pressure chemical vapor deposition process.

Claim 9 (Original): The article of claim 1 in which the alternating layers comprising the multilayer thin film interference coating are sequentially deposited by a plasma assisted process.

Claim 10 (Original): The article of claim 1 in which the alternating layers comprising the multilayer thin film interference coating are sequentially deposited by a sputtering process.

Claim 11 (Original): The article of claim 1 in which the alternating layers comprising the multilayer thin film interference coating are sequentially deposited by an evaporative coating process.

Claim 12 (Original): The article of claim 1 in which the alternating layers comprising the multilayer thin film interference coating are sequentially deposited by

spraying onto the surface of the substrate liquid solution containing materials capable of being decomposed to form the desired layers.

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Claim 13 (Currently amended): An article of manufacture comprising a substantially transparent substrate having at least one curved surface and at least two dimensions of substantially the same proportion and a multilayer thin film interference coating over substantially the entire surface of said substrate, said coating consisting of alternating layers of substantially nonabsorbing materials with a relatively high refractive index and a relatively low refractive index with respect to each other, the thicknesses and identities of said layers being chosen so that the entire coating will preferentially reflect and transmit at least some of the incident light within predetermined wavelength bands.

Claim 14 (Original): The article of Claim 13 wherein the entire coating preferentially transmits at least some of the incident light above a predetermined wavelength.

Claim 15 (Original): The article of Claim 13 wherein the entire coating preferentially transmits at least some of the incident light below a predetermined wavelength.

Claim 16 (Original): The article of Claim 13 having a size and shape suitable for use as a decorative object selected from the group consisting of gemstones and ornaments.

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Claim 17 (Currently amended): An article of manufacture comprising: a [non-planar] substrate having height, width, and depth dimensions of substantially the same proportion formed from a substantially transparent material; and

a substantially uniform multilayer thin film interference coating over substantially the entire surface of said non-planar substrate, said coating comprising alternating layers of materials having different refractive indices to thereby form a coating which is substantially transmissive of incident light at predetermined wavelengths.

Claim 18 (Original): The article of Claim 17 wherein the coating is substantially transmissive of incident light above a predetermined wavelength.

Claim 19 (Original): The article of Claim 17 wherein the coating is substantially transmissive of incident light below a predetermined wavelength.

Claim 20 (Original): The article of Claim 17 wherein the coating is substantially transmissive of incident light within a predetermined wavelength band.

Claim 21 (Original): The article of Claim 17 having a size and shape suitable for use as a decorative object selected from the group consisting of gemstones and ornaments.

Claim 22 (Currently amended): A uniformly coated [complex shaped] object comprising a [complex shaped] substrate having a depth dimension of substantially the same proportion at its height or width dimensions formed from a substantially transparent material and a coating over substantially the entire surface thereof, said coating comprising alternating layers of materials having relatively high and relatively low reflective indices relative to each other and being substantially uniform and over substantially the entire surface of said substrate.

Claim 23 (Original): The object of Claim 22 wherein said coating controls the transmission of incident light at predetermined wavelengths.

Claim 24 (Original): The object of Claim 22 wherein said coating controls the absorption of incident light at predetermined wavelengths.

Claim 25 (Original): The object of Claim 22 wherein said coating controls the reflection of incident light at predetermined wavelengths.

Claim 26 (Original): The article of Claim 22 having a size and shape suitable for use as a decorative object selected from the group consisting of gemstones and ornaments.

~~Claim 27 (Currently amended): A decorative object comprising a substantially transparent substrate having at least two non-parallel curved surfaces and a coating uniformly covering substantially the entire surface of the substrate, said coating comprising alternating layers of materials having differing refractive indices to thereby substantially transmit all of the incident light at predetermined wavelengths.~~

Claim 28 (Currently amended): A method of making a uniformly coated object [having a complex shape], said method comprising the steps of:

- (a) providing a substrate having [a complex shape] height, width, and depth dimensions of substantially the same proportion;
- (b) depositing a coating over substantially the entire surface of the [complex shaped] substrate, the coating comprising alternating layers of materials having different indices of refraction so that the coating is substantially transmissive of light at predetermined wavelengths.

Claim 29 (Original): The method of Claim 28 wherein the coating is deposited by low pressure chemical vapor deposition.

Claim 30 (Original): The method of Claim 28 wherein the object has a size and shape suitable for use as a decorative object selected from the group consisting of gemstones and ornaments.

Claim 31 (Original): The method of Claim 28 wherein the coating is substantially transmissive of incident light above a predetermined wavelength.

Claim 32 (Original): The method of Claim 28 wherein the coating is substantially transmissive of incident light below a predetermined wavelength.

Claim 33 (Original): The method of Claim 28 wherein the coating is substantially transmissive of incident light within a predetermined wavelength band.

Claim 34 (Original): The method of Claim 28 having a size and shape suitable for use as a decorative object selected from the group consisting of gemstones and ornaments.

Claim 35 (Currently amended): A method of making a uniformly coated object [having at least two planar surfaces, said method] comprising the steps of:

(a) providing a substrate having at least [two planar surfaces] one curved surface and at least two dimensions of substantially the same proportion;

(b) depositing a coating over substantially the entire surface of the [planar shaped] substrate, the coating comprising alternating layers of materials having different indices of refraction so that the coating is substantially transmissive of light at predetermined wavelengths.

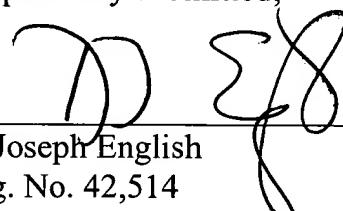
Claim 36 (Original): The method of Claim 35 wherein the coating is deposited by low pressure chemical vapor deposition.

Claim 37 (Original): The method of Claim 35 wherein the coating is substantially transmissive of incident light above a predetermined wavelength.

Claim 38 (Original): The method of Claim 35 wherein the coating is substantially transmissive of incident light below a predetermined wavelength.

Claim 39 (Original): The method of Claim 35 wherein the coating is substantially transmissive of incident light within a predetermined wavelength band.

Respectfully submitted,

  
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